

# PATENT COOPERATION TREATY

TRANSLATION

From the  
INTERNATIONAL SEARCHING AUTHORITY

PCT

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing  
(day/month/year)

Applicant's or agent's file reference

**P039690P0**

**FOR FURTHER ACTION**

See paragraph 2 below

International application No.

**PCT/JP2005/019481**

International filing date (day/month/year)

**24.10.2005**

Priority date (day/month/year)

**14.04.2005**

International Patent Classification (IPC) or both national classification and IPC

Applicant

**MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD.**

1. This opinion contains indications relating to the following items:

- |                                     |              |  |
|-------------------------------------|--------------|--|
| <input checked="" type="checkbox"/> | Box No. I    | Basis of the opinion   |
| <input type="checkbox"/>            | Box No. II   | Priority   |
| <input type="checkbox"/>            | Box No. III  | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability   |
| <input type="checkbox"/>            | Box No. IV   | Lack of unity of invention   |
| <input checked="" type="checkbox"/> | Box No. V    | Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/>            | Box No. VI   | Certain documents cited  |
| <input type="checkbox"/>            | Box No. VII  | Certain defects in the international application   |
| <input type="checkbox"/>            | Box No. VIII | Certain observations on the international application  |

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/JP	Date of completion of this opinion	Authorized officer
Facsimile No.		Telephone No.

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Box No. I

Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of:
  - ☒ the international application in the language in which it was filed
  - ☐ the translation of the international application into \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (Rule 12.3(a) and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material
    - ☐ a sequence listing
    - ☐ table(s) related to the sequence listing
  - b. format of material
    - ☐ on paper
    - ☐ in electronic form
  - c. time of filing/furnishing
    - ☐ contained in the international application as filed
    - ☐ filed together with the international application in electronic form
    - ☐ furnished subsequently to this Authority for the purposes of search
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

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**Box No. V** Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

**1. Statement**

Novelty (N)	Claims	1 - 6	YES
	Claims		NO
Inventive step (IS)	Claims	3, 4	YES
	Claims	1, 2, 5, 6	NO
Industrial applicability (IA)	Claims	1 - 6	YES
	Claims		NO

**2. Citations and explanations:**

Document 1: JP, 7-266266, A (Fanuc Ltd.)  
Document 2: JP, 2001-41709, A (Toyota Central Research and Development Laboratories, Ltd.)  
Document 3: JP, 61-62103, A (Hitachi Keiyo Engineering Co., Ltd.)  
Document 4: JP, 63-77692, A (Omron Tateishi Electronics Co.)

**Claim 1**

Document 1 (particularly paragraphs [0019]-[0031], Fig. 1) describes a multi-jointed industrial robot having a joint section 16 between an upper arm 12 and a forearm 14, with a motor to rotate the joint shaft 13, wherein said robot is constructed in such a manner that the forearm 14 can change its position in relation to the upper arm 12 on the joint shaft J3 as a center of rotation, wherein, with a detachable position-setting pin 24 put in a pin-receiving hole 26 in the upper arm 12, and the joint shaft J3 rotated so that the forearm 14 turns in relation to the upper arm 12, when a projection 22 on the forearm 14 engages with the position-setting pin 24, the position in that state is set as a geometrical reference position.

It was a well-known technology that, when some operation is performed on a robot, a message, etc., is shown on a showing means such as a display device to prompt the operator to perform necessary operations (refer to, e.g., document 2), and a person skilled in the art could have easily added the above-mentioned well-known technology to the invention described in document 1.

Accordingly the subject matter of claim 1 does not appear to involve an inventive step.

**Claim 2**

In the invention described in document 1, after the reference position for the multi-jointed industrial robot is set, if the joint shaft J3 was rotated with the position-setting pin 24 attached, the position-setting pin 24 on the upper arm 12 would collide with the projection 22 on the forearm 14. It is therefore natural that the detachable position-setting pin 24 should be removed to prevent the collision and that it should be verified that no collision would occur.

Accordingly the subject matter of claim 2 does not appear to involve an inventive step.

**Claim 5**

It was a well-known technology that one of a plurality of joints that a robot has is selected with which a reference position is set (refer to, e.g., document 3), and a person skilled in the art could have easily added said well-known technology to the invention described in document 1.

Accordingly the subject matter of claim 5 does not appear to involve an inventive step.

**Claim 6**

It was a well-known technology that it is detected that the current in a motor has increased to reach a reference value, whereby it is detected that an arm of a robot comes into contact with a

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citations and explanations supporting such statement

mechanical stopper (refer to, e.g., document 4). A person skilled in the art could have easily added said well-known technology to the invention described in document 1.

Accordingly the subject matter of claim 6 does not appear to involve an inventive step.

Claims 3 and 4

The subject matters of claims 3 and 4 are not described in any of the documents cited in the ISR, nor would have been obvious to a person skilled in the art.